

## 5.0 GEOPROBE INVESTIGATIONS OF PATHWAYS TO SURFACE WATER

Geoprobe investigations will be performed in two poorly understood areas that yield groundwater containing VOC concentrations in excess of RFCA Teir II action level criteria. These surveys will provide data necessary for a better evaluation of potential groundwater contaminant pathways to surface water. The evaluations are being performed by the GMP to comply with the requirements of the proposed Integrated Monitoring Program.

### 5.1 East Trenches Groundwater VOC Plume Evaluation

Well 23296, located along South Walnut Creek between Ponds B-2 and B-3, has produced groundwater that exceeds the Teir II action level criteria for certain VOCs. The source for this contamination is thought to be the East Trenches groundwater plume, whose source is mainly Trenches T-3 and T-4. The hillside between the known plume boundaries and the stream is largely uncharacterized, and thus the location and configuration of the groundwater flowpath is uncertain. To determine whether a flowpath extends from the East Trenches into well 23296 and surface waters of South Walnut Creek, up to 20 Geoprobe boreholes will be drilled along the road south of South Walnut Creek (see line segment in Figure 5-1). A baseline arrangement of eleven boreholes will be initially drilled at 100 foot intervals along the line to locate shallow saturated zones associated with potential groundwater pathways. Up to nine boreholes will subsequently be drilled near potential pathways identified during the baseline drilling to better define the boundaries of these pathways. The location of these additional boreholes will be chosen in the field at the discretion of the Site Geologist in consultation with the Project Manager. All boreholes will be completed as temporary wellpoints in accordance with GT.06, Monitoring Well and Piezometer Installation, and GT.02, Well Development. Groundwater will be sampled in all new and some existing wellpoints to identify the most likely contaminant pathway.

### 5.2 North Industrial Area Groundwater VOC Plume Evaluation

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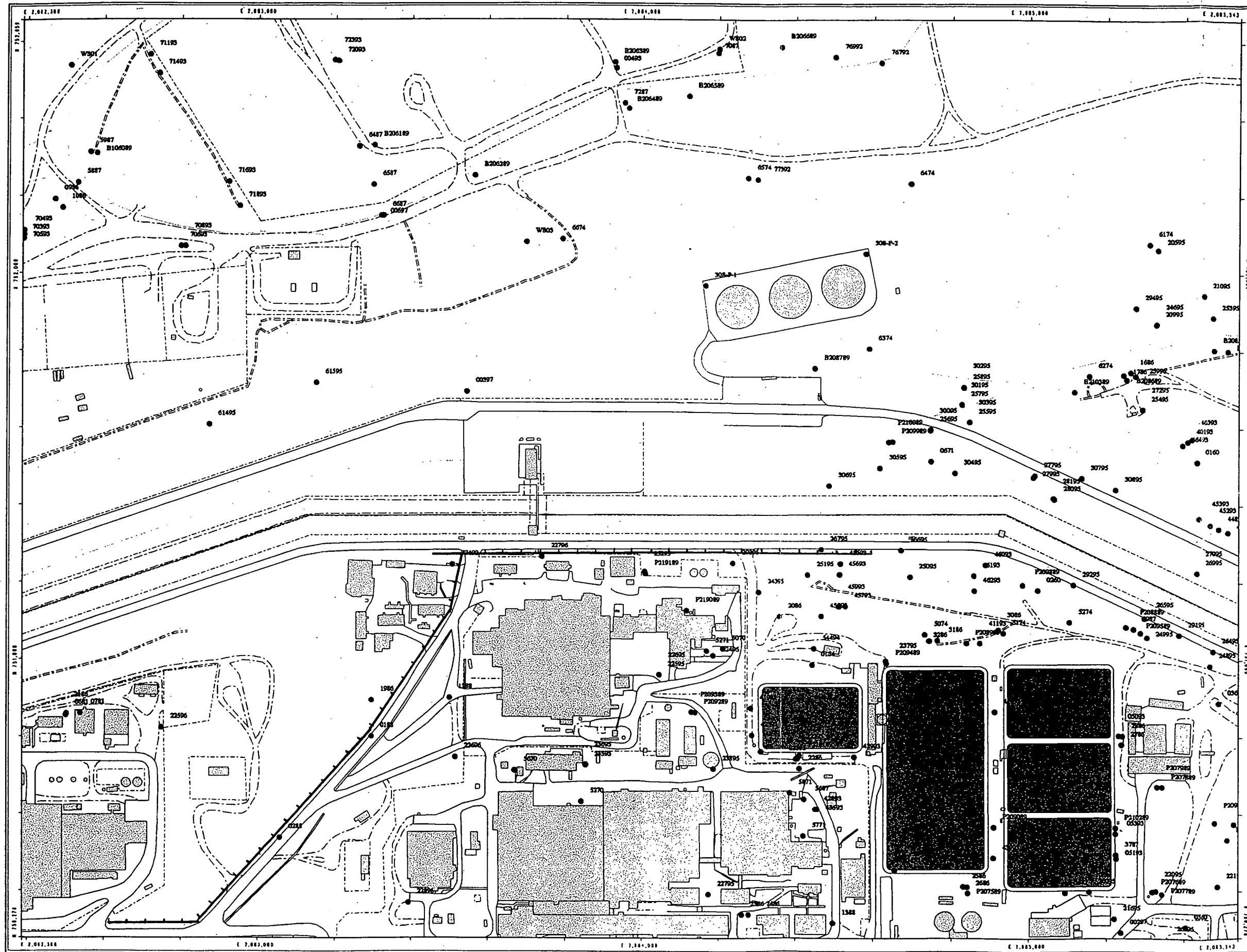
Wells P219189 and 22796, located near Building 771, have also produced groundwater containing VOCs. The source for this contamination is thought to be the Industrial Area groundwater plume, which has the potential in this area to spread northward toward North Walnut Creek. Up to approximately 54 Geoprobe boreholes will be drilled along the northern and western edges of the 700 Area (see line segment in Figure 5-2) to evaluate whether contaminated groundwater can migrate to surface water. A baseline arrangement of eight boreholes will be initially drilled at 100 foot intervals along the line to locate shallow saturated zones associated with potential groundwater pathways. Up to seven boreholes will subsequently be drilled near potential pathways identified during the baseline drilling to better define the boundaries of these pathways. The location of these additional boreholes will be chosen in the field at the discretion of the Site Geologist in consultation with the Project Manager. All boreholes will be completed as temporary wellpoints in accordance with GT.6, Monitoring Well and Piezometer Installation, and GT.02, Well Development. Groundwater will be sampled in all new wellpoints following development.

## 6.0 PROJECT ORGANIZATION AND STAFFING

The authority and responsibility for RFETS Contractor and subcontractor personnel involved in the implementation of FY97 WARP are shown in Figure 6-1. Descriptions of key project positions contained within the chart are described in Section 3.0 of the Work Plan.

## 7.0 PROJECT SCHEDULE

Non-intrusive well abandonment and Geoprobe field activities for FY97 WARP are scheduled to commence on or after June 16, 1997. Intrusive well abandonment and installation activities are scheduled to begin on or after June



**Figure 5-2**  
**Groundwater Plume Evaluation**  
**North of Industrial Area**  
**near 22796 and P219189**

**EXPLANATION**

- Geoprobe well siting area
- Groundwater Monitoring Wells

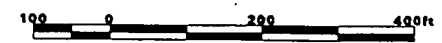
**Standard Map Features**

- Buildings
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences
- Paved roads
- Dirt roads

**DATA SOURCE:**  
 Buildings, roads, and fences provided by  
 Facilities Engr.  
 EG&G Rocky Flats, Inc. - 1991.  
 Hydrology provided by  
 USGS - (date unknown)




Scale = 1 : 3070  
 1 inch represents approximately 256 feet



State Plane Coordinate Projection  
 Colorado Central Zone  
 Datum: NAD27

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

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